and trapping can continue sustainably if measures are taken to avoid the killing of declining species. Some mammals, like the closely related Four-toed Elephant-shrew *Petrodomus tetradactylus*, are abundant despite fairly high trapping pressure. Instituting a management policy which includes constructive discussion with hunters, backed up with selective removal of traps set for endangered species like Ader's Duiker *Cephalophus adersi*, can ensure that a sustainable balance is achieved and maintained.

The eight hundred and thirty-sixth meeting of the Club was held on Tuesday, 18 January 1994 in the Senior Common Room of the Sherfield Building, Imperial College, South Kensington at 6.15 p.m. 24 Members and 11 Guests attended.

Members attending were: D. Griffin (*Chairman*), J. A. Burton (*Speaker*), Miss H. Baker, P. J. Belman, P. J. Bull, Professor R. J. Chandler, Dr R. A. Cheke, S. J. Farnsworth, A. Gibbs, Revd T. W. Gladwin, Dr A. G. Gosler, C. A. R. Helm, R. H. Kettle, N. S. Malcolm, Dr J. F. Monk, D. J. Montier, Mrs A. M. Moore, R. G. Morgan, Mrs. M. Muller, P. J. Oliver, R. E. F. Peal, Dr R. C. Self, P. J. Sellar, N. H. F. Stone.

Guests attending were: Mrs F. Farnsworth, Mrs B. Gibbs, Mrs J. Gladwin, Miss K. Hoff, Mrs D. Monk, Mrs M. Montier, P. J. Moore, B. O'Brien, Mrs S. Stone, C. Walker, Miss K. J. Wilson.

After supper Mr P. J. Bull presented a short communication on the recovery of a Common Starling *Sturnus vulgaris* from Kiev, in Ukraine.

Mr J. A. Burton was the principal speaker of the evening. He showed a programme of extracts from films of particular ornithological interest which he has compiled from the National Film Archive. It includes extracts from Oliver Pike's film, made in 1903, of landing on St Kilda, films made in Central Hungary and in East Africa before 1940, and Roger Tory Peterson's film of *Wild Europe*. It was possible to see from the extracts, which were of remarkable quality, the development of modern wildlife filming techniques.

Birds of the lower Kolyma River, northeast Siberia

by Eugene R. Potapov

Received 2 March 1993

This paper is based on observations made in four study areas on the lower Kolyma River in 1982–92: in the Chukochya river basin in 1982–83; in the Kolyma river delta (Nerpichye Lake and Pokhodskaya Yedoma study areas) in 1985; and in the Konkovaya river basin in 1986–92 (Fig. 1). Occasional visits were also made to the right bank of the Kolyma river. All study areas except the Nerpichye Lake area are located in the Kolyma lowlands in the typical tundra subzone. This zone is characterised by the absence of tall bushes on the watersheds. The territory is underlain by permafrost and, generally, the study areas resemble gently rolling plains with characteristic hillocks called *yedomas* separated by river valleys and perforated by numerous lake depressions indicating that the permafrost plays an important role in the formation of the topography, or at least the micro-relief.

The study areas in the Chukochya and Konkovaya rivers are very similar. The greater part of the territory consists of *yedomas* with numerous lake hollows. River valleys are relatively dry, but contain some polygonal bogs.

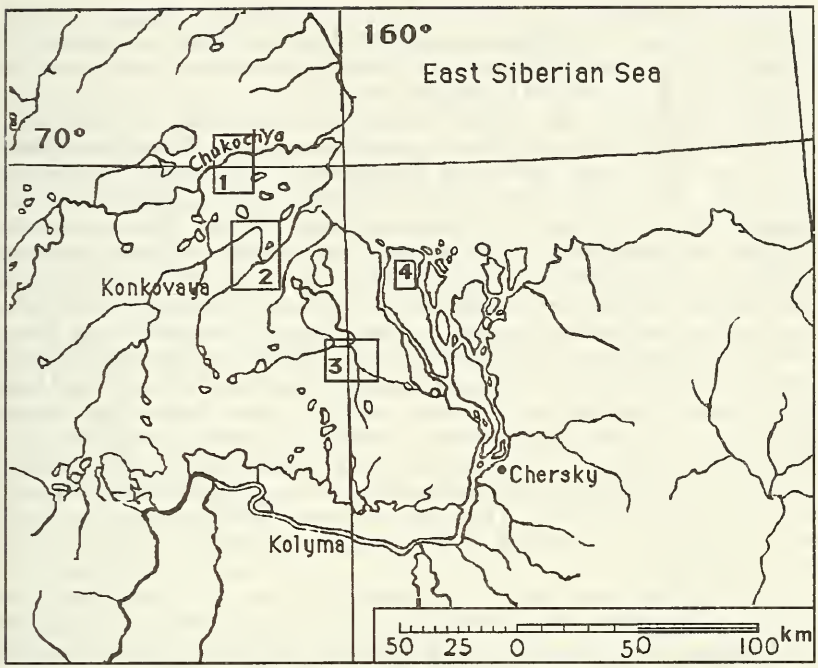

Figure 1. The four study areas in the lower Kolyma River area: 1, Chukochya River (1982–83); 2, Konkovaya River (1986–92); 3, Nerpichye Lake (1985); 4, Pokhodskaya Yedoma (1985).

The Nerpichye Lake study area is part of the Kolyma river flood-plain. Polygonal bogs dominate the landscape. There are no *yedomas* in the area; the most visible landmarks are *pingos* (small hillocks pushed up by freezing water below the soil), which are scattered in the tundra. The vegetation is dominated by bushes and moss. This study area is located in the bushy tundra subzone.

The Pokhodskaya Yedoma is a rocky cliff surrounded with bush-less tundra flood plain. The dry vegetation on the rock contrasts with the wet habitats in the plain.

Background

Studies of the fauna of the Kolyma River began in the 19th century when the area was visited by Matyushkin and Vrangel (Vrangel 1841) and later by Baron G. Maidel (1894) who made a zoological collection. In 1892 the Kolyma River was visited by I. Chersky (Revsin 1952), who also collected birds and mammals. The collection (kept at the Zoological Institute, St Petersburg) covered the taiga of the Kolyma River but includes few tundra specimens because of the untimely death of I. Chersky which brought the expedition to an end. In 1905 the

Kolyma lowlands were visited by S. A. Buturlin (Buturlin 1905, 1906a–b). While travelling around the Kolyma delta he visited the Nerpichye Lake and Pokhodskaya Yedoma where my study areas are located. He also collected birds and animals.

Later the region was visited by N. N. Gribanovsky (Gribanovsky 1915). In 1911–1912 the Kolyma lowlands were visited by Johan Koren on his own schooner. He made a significant collection of birds and mammals. The bird collection was studied by the sponsor of the expedition, J. E. Thayer (Thayer & Bangs 1914). The area of the Kolyma lowlands made such a deep impression on Koren that he returned and settled there in 1914–1918. In his journey to the lower Kolyma in 1914 he was accompanied by Mr. Copley Amory, Jr., who also made a bird collection which was eventually studied by J. Riley (1918). During his period of residence in 1914–18 in Nizhne-Kolymsk (near the recent Kolymskoye settlement) Koren made a substantial bird and mammal collection. The bird collection was rescued in winter 1917/18 by the crew of the vessel "Maud" led by R. Amundsen, and later investigated by Schaaning (Schaaning 1954). The Roald Amundsen expedition was trapped by ice near the Kolyma estuary several times in 1918–24. They also observed wildlife and left a small bird collection later studied by Schaaning and Sverdrup (Schaaning & Sverdrup 1928).

In the 1930s some data on the local birds were collected by A. I. Ivanov (Tugarinov *et al.* 1934). In 1957 K. Vorob'ov visited the Pokhodsk, Nerpichye Lake and Konkovaya and Chukochya rivers. His data are summarised in his book *Birds of Yakutia* (Vorob'ov 1963). Spangenberg spent the spring of 1959 in the Kolyma delta not far from the Pokhodskaya study area, and published a list of the birds recorded (Spangenberg 1960).

Since 1978 the research team led by Dr A. V. Andreev from the Magadan Institute of Biological Problems of the North has carried out research on bird ecology in this region. Kondrat'ev (1979), Andreev & Dorogoy (1987), Gavrilov & Potapov (1991), Chernov & Khlebosolov (1989) and Khlebosolov (1986) published various papers containing faunal records. I joined the team in 1982. Some of my reports were included in the book on the avifauna of northeast Siberia (Kretchmar *et al.* 1991), which summarises all observations to that date. In 1990 M. Densley visited the Konkovaya study area, where he studied a colony of Ross's Gulls (Densley 1991).

SYSTEMATIC LIST

Of the 91 species recorded in the region, only Willow Grouse, Snowy Owl and Gyrfalcon live on the tundra all year round. All the others are migratory. They arrive on the tundra at the end of May and leave in August–September. In July–August there is a migration of geese and waders to the north. These birds spend several weeks on the mud-flats of the Arctic Ocean, before starting their journey to the south.

The following species are common breeders in all four study areas: Red-throated Diver *Gavia stellata*, Black-throated Diver *G. arctica*,

Bewick's Swan *Cygnus bewickii* (also flocks of non-breeding birds in Pokhodskaya study area), Teal *Anas crecca*, Pintail *A. acuta* (moulting flocks of Teal and Pintail in Konkovaya study area), King Eider *Somateria spectabilis*, Scaup *Aythya marila*, Long-tailed Duck *Clangula hyemalis*, Red-breasted Merganser *Mergus serrator*, Rough-legged Buzzard *Buteo lagopus* (except Nerpichye Lake area), Willow Grouse *Lagopus lagopus*, Sandhill Crane *Grus canadensis*, Grey Plover *Squatarola squatarola*, Lesser Golden Plover *Pluvialis dominica*, Spotted Redshank *Tringa erythropus*, Grey Phalarope *Phalaropus fulicarius*, Red-necked Phalarope *P. lobatus*, Ruff *Philomachus pugnax*, Temminck's Stint *Calidris temminckii*, Pectoral Sandpiper *C. melanotos*, Snipe *Gallinago gallinago*, Long-billed Dowitcher *Limnodromus scolopaceus*, Arctic Skua *Stercorarius parasiticus*, Long-tailed Skua *S. longicaudus*, Herring Gull *Larus argentatus*, Glaucous Gull *L. hyperboreus*, Ross's Gull *Rhodostethia rosea*, Arctic Tern *Sterna paradisaea*, Red-throated Pipit *Anthus cervinus*, Yellow Wagtail *Motacilla flava*, White Wagtail *M. alba*, Willow Warbler *Phylloscopus trochilus*, Wheatear *Oenanthe oenanthe* (except Nerpichye Lake area), Bluethroat *Luscinia svecica*, Common Redpoll *Carduelis flammea*, Little Bunting *Emberiza pusilla*, Lapland Bunting *Calcarius lapponicus*.

White-billed Diver *Gavia adamsii*. Breeds on big 'alas'-type lakes (thaw-lakes).

Pacific Diver *G. pacifica*. Common in Nerpichye Lake study area, not very common in the Konkovaya and Chukochya study areas.

Red-necked Grebe *Podiceps grisegena*. Seen every year in all study areas except the Chukochya study area. Rare breeder in the Nerpichye Lake study area.

Whooper Swan *C. cygnus*. Recorded breeding only in Konkovaya study area. Occasional visits of non-breeding birds to all study areas. Moulting birds seen in the Nerpichye Lake study area.

Brent Goose *Branta bernicla*. Recorded on migration in all study areas. Nesting colonies are found along the Arctic Ocean coastline.

White-fronted Goose *Anser albifrons*. Breeds in all study areas, but is not very common. Vorob'ov (1963) reported the species more abundant in the region than the Bean Goose. Now the situation is reversed. This is the result of a dramatic decline in the numbers of White-fronted Goose.

Lesser White-fronted Goose *A. erythropus*. Recorded on migration in all study areas. No breeding records. Relatively rare.

Bean Goose *A. fabalis*. Relatively common breeder. Nests are found on clay precipices along rivers, and in polygon habitat in river valleys.

Snow Goose *Chen caerulescens*. Some flocks were seen in Chukochya and Konkovaya valleys on spring migration. Nearest breeding record in Chukochya mouth (Andreev & Dorogoy 1987), also seen in the Kolyma river delta by Spangenberg (1960).

Baikal Teal *Anas formosa*. Breeding recorded in the Konkovaya study area. Seen in Nerpichye Lake and Chukochya study areas.

Wigeon *A. penelope*. Recorded on summer migration in all study areas. Moulting birds seen in the Konkovaya study area. No breeding records.

Shoveler *A. clypeata*. Summer records in the Kolyma and Konkovaya study area. Recorded breeding in 1970 in the Upper Konkovaya river by Andreev (Kretchmar *et al.* 1991).

Spectacled Eider *Somateria fischeri*. Breeding records from Chukochya and Konkovaya study areas. Seen on migration in all study areas.

Steller's Eider *Polysticta stelleri*. Seen on migration in all study areas, no breeding records within the study areas. One nest was found by Andreev (Kretchmar *et al.* 1991) in 1978 in flat dried tundra east from the Konkovaya River.

American White-winged Scoter *Melanitta deglandi*. Summer visitor to the Nerpichye Lake study area. No breeding records.

Osprey *Pandion haliaetus*. One breeding record in the Kolyma delta. The nest was located 20 km north from the Pokhodsk settlement. It was on a bush about 1.5 m high and contained 2 chicks (S. Mochalov pers. comm.)

White-tailed Eagle *Haliaeetus albicilla*. Young birds and adults seen in Nerpichye Lake and Konkovaya study areas. Nearest non-active nests built on the heaps of washed-out trees were found on the Arctic Ocean coastline.

Hen Harrier *Circus cyaneus*. Breeding recorded only in the Konkovaya study area.

Goshawk *Accipiter gentilis*. Seen in all study areas, no breeding records. Nearest breeding sites are in woodlands on the east bank on the Kolyma river. The white phase is frequent.

Gyrfalcon *Falco rusticolus*. Seen in all study areas. No breeding records. Nearest nests are located along the tree-line. Breeding records in the Pokhodskaya Yedoma study area and also on the east bank of the Kolyma river.

Peregrine Falcon *Falco peregrinus*. Breeds in all study areas except Nerpichye Lake area. Rare.

Kestrel *F. tinnunculus*. Seen in all study areas. No breeding records.

Merlin *F. columbarius*. Seen in all areas. No breeding records.

Ptarmigan *L. mutus*. Breeding records in the mountains east of the Kolyma river. Occasional winter visits to the west bank of the Kolyma river.

Siberian White Crane *Grus leucogeranus*. Rare. Seen in all study areas. Breeding in the Konkovaya study area.

Turnstone *Arenaria interpres*. Seen in all study areas on migration. No breeding records.

Dotterel *Charadrius morinellus*. Seen in all study areas. No breeding records.

Ringed Plover *Charadrius hiaticula*. Found nesting only in tundra adjoining the sea-coast (Kretchmar *et al.* 1991). Migrating birds may be seen in the Konkovaya study area in July-August.

Wood Sandpiper *Tringa glareola*. Occasional visits to the Konkovaya study area.

Terek Sandpiper *Xenus cinereus*. Seen in the Konkovaya study area. No breeding records.

Little Stint *Calidris minutus*. Found by I. Dorogoy in 1983–1984 in the Lower Chukochya River (Kretchmar *et al.* 1991).

Red-necked Stint *C. ruficollis*. Found nesting in 1982 in the Chukochya study area. No breeding records since that time.

Curlew Sandpiper *C. ferruginea*. Rare breeder in Konkovaya and Chukochya study areas.

Dunlin *C. alpina*. Seen in all study areas. No breeding records.

Sharp-tailed Sandpiper *C. acuminata*. Breeds in Konkovaya and Chukochya and Nerpichye Lake study areas, on wet polygons in lake hollows or river valley.

Sanderling *C. alba*. Seen in the Konkovaya study area in 1979 by Andreev (Kretchmar *et al.* 1991). Never seen since this time.

Pintail Snipe *Gallinago stenura*. Common breeder in Konkovaya and Nerpichye Lake study areas.

Jack Snipe *Lymnocryptes minimus*. Seen in all study areas. No breeding records.

Broad-billed Sandpiper *Limicola falcinellus*. Rare breeding records in Konkovaya study area.

Bar-tailed Godwit *Limosa lapponica*. Breeds in Konkovaya and Chukochya study areas.

Pomarine Skua *Stercorarius pomarinus*. Breeding records only in Konkovaya study area in 1987. Seen in all study areas.

Black-headed Gull *Larus ridibundus*. Seen in the Konkovaya study area as a summer vagrant. No breeding records.

Sabine's Gull *Xema sabini*. Seen in all study areas. No breeding records.

Cuckoo *Cuculus canorus*. Seen once in the Konkovaya study area.

Snowy Owl *Nyctea scandiaca*. Seen in all study areas. Breeding records in the Konkovaya and Chukochya study areas.

Short-eared Owl *Asio flammeus*. Breeds in all study areas, but not every year.

Sand Martin *Riparia riparia*. Seen in all study areas. Breeding records in the Konkovaya and Chukochya study areas.

Swallow *Hirundo rustica*. Seen in all study areas. No breeding records.

Great Grey Shrike *Lanius excubitor*. Seen in all study areas except Chukochya and the Pokhodskaya Yedoma study areas. No breeding records.

Siberian Jay *Perisoreus infaustus*. Once recovered from Peregrine pellets in the Pokhodskaya Yedoma study area.

Carrion Crow *Corvus corone*. Recorded in all study areas as an occasional visitor. No breeding records.

Siberian Accentor *Prunella montanella*. Breeding records in the Konkovaya study area.

Naumann's Thrush *Turdus naumanni*. Common breeder in the Konkovaya study area.

Redwing *T. iliacus*. A single male was seen in 1984 in the Nerpichye Lake study area (Kretchmar *et al.* 1991).

Stonechat *Saxicola torquata*. Breeding records in the Konkovaya study area (Gavrilov & Potapov 1991).

Brambling *Fringilla montifringilla*. Recorded once in the Konkovaya study area (Gavrilov & Potapov 1991).

Common Rosefinch *Carpodacus erythrinus*. Breeding record in the Nerpichye Lake study area.

Pine Grosbeak *Pinicola enucleator*. One record of a vagrant in the Konkovaya study area.

Pallas's Reed Bunting *Emberiza pallasi*. Breeds in the Konkovaya study area.

Snow Bunting *Plectrophenax nivalis*. Seen on migration in all study areas. Recorded breeding in the Pokhodskaya Yedoma study area.

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New departmental records and notes for some Bolivian birds

by Susan E. Davis, Omar Rocha O., Jaime Sarmiento & Werner Hanagarth

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Delimitation of bird distributions in Bolivia is important because the country is situated at the transition between several biogeographic regions: Amazonia, Gran Chaco, Cerrado and the Andes. Many Amazonian bird species reach the southern extension of their range in Bolivia; likewise, there are numerous species that reach their northern, western or eastern range limit in Bolivia. Remsen & Traylor (1989) presented departmental records for 1274 species and additional distributional data (with 37 new records for the country) have been contributed by Hanagarth & Sarmiento (1988), Bates *et al.* (1992), Cabot (1990), Parker (1989), Parker *et al.* (1991), Parker & Bailey (1991) and Davis & Flores (1994).

Here we present new departmental records for 52 species. A revision of the birds in the Colección Boliviana de Fauna (CBF), La Paz, Bolivia, produced 26 departmental records including the first documented record for some species listed in Remsen & Traylor (1989) as sight records. Recent fieldwork by ORO produced 10 additional departmental records based on voice recordings and one photograph; the recordings were analysed by T. A. Parker, III and are housed at the CBF. Also included are sight records (*) for 19 species easily identified in the field; many of these species are wide-ranging water-birds. Sight records by ORO and JS on the Ríos Madre de Dios and Manuripi, Dpto. Pando, were made while navigating in a motorized launch. In addition to the new departmental records, we include 'first specimen' data for 11 species previously documented by voice recordings. Among the records reported are the first specimens for Bolivia of *Notiochelidon flavipes* and *Turdus lawrencii*. We also present data for some species known in the country from only a few localities (*Lurocalis semitorquatus, Nyctiprogne leucopyga, Caprimulgus sericocaudatus, Cymbilaimus lineatus, Frederickena unduligera, Herpsilochmus longirostris, Myrmeciza*